

CLAIMS

1. A mounting plate as hereinbefore described for a surface finishing machine, the mounting plate including at least one vacuum port, a plurality of mounting areas proud of an intervening web and adapted to have mounted thereto surface finishing pads, and the mounting plate being adapted such that dust tends to progress into the proximity of the web and may therefrom be extracted through the vacuum port or vacuum ports by vacuum dust extraction means.
2. A mounting plate as in claim 1 wherein the vacuum port or at least one of the vacuum ports is within the web.
3. A mounting plate as in claim 1 wherein the vacuum port or at least one of the vacuum ports is within a one of the mounting areas.
4. A mounting plate as in claim 1 wherein the mounting areas are integral with the web.
5. A mounting plate as in claim 1 wherein the mounting areas are formed separately to the web and are fitted thereto so that the mounting areas are proud of the web.
6. A mounting plate as in any one of claims 1 to 5 inclusive being adapted to be driven by a random orbital means.
7. A mounting plate as in any one of claims 1 to 6 inclusive wherein the centre of the mounting plate is part of the web.
8. A mounting plate as in claim 7 wherein the mounting areas are radially spaced about the centre of the mounting plate.
9. A mounting plate as in claim 8 including at least three mounting areas.
10. A mounting plate as in claim 9 including four mounting areas.
11. A mounting plate as in any one of claims 7 to 10 inclusive including a plurality of vacuum ports, at least one vacuum port being through the web and proximal to the centre of the mounting plate, and other vacuum ports being through the web and proximal to the periphery of the mounting plate.
12. A mounting plate as in any one of claims 7 to 11 inclusive including a plurality of vacuum ports, at least one vacuum port being through each mounting

area being adapted to align with a dust extraction aperture of a surface finishing pad.

13. A mounting plate as in claim 12 wherein the mounting areas are circular and the vacuum port of each mounting area being between the centre of the
5 respective mounting area and the periphery of the respective mounting area distal the centre of the mounting plate.

14. A mounting plate as in any one of claims 1 to 13 inclusive wherein each mounting area has at least one channel therein adapted to direct dust to the vacuum port or a one of the vacuum ports through the respective mounting area.

10 15. A mounting plate as in any one of claims 1 to 14 inclusive wherein the mounting areas are circular and of diameter less than or equal to 373 mm.

16. A mounting plate as in any one of claims 1 to 15 inclusive including hook and loop means adapted for attaching a surface finishing pad to each mounting area on the mounting plate.

15 17. A mounting plate as in any one of claims 1 to 16 inclusive comprising a plurality of layers between an external surface upon which the mounting areas lie and a rear surface, and the mounting plate including a first layer including the mounting areas made of urethane and a second layer of resilient material.

20 18. A mounting plate as in any one of claims 1 to 17 inclusive wherein the vacuum port or at least one of the vacuum ports fits over a hollow cylindrical dust extraction peg, the dust extraction peg having an external circumferential groove, and the mounting plate including a thin backing plate with a peg aperture of diameter slightly smaller than the external diameter of the peg and adapted to receive the dust extraction peg, and the thickness and resiliency of the backing
25 plate being such that the mounting plate may be pushed onto and pulled off the dust extraction peg and when secured relative to the dust extraction peg the backing plate resides within the groove.

30 19. A surface finishing pad including the mounting plate of claim 1 and a surface finishing disc mounted to each mounting area, the surface finishing disc suitable for sanding, burnishing or polishing a surface.

20. A surface finishing machine including
a mounting plate as hereinbefore described and having at least one vacuum port, a plurality of mounting areas proud of an intervening web and adapted to

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have mounted thereto surface finishing pads, and the mounting plate being adapted such that dust tends to progress into the proximity of the web and may therefrom be extracted through the vacuum port or vacuum ports by vacuum dust extraction means,

5 and random orbital drive means adapted to drive the mounting plate.

21. A surface finishing machine as in claim 20 wherein the mounting areas are formed separately to the web and are fitted thereto so that the mounting areas are proud of the web.

22. A surface finishing machine as in either claim 20 or 21 including vacuum dust extraction means adapted to facilitate vacuum dust extraction through respective vacuum ports on the mounting plate.

23. A surface finishing machine as is claim 22 wherein the dust extraction means includes at least one vacuum aperture adapted to align with at least one vacuum port of the mounting plate, and vacuum connection means connecting the aperture to a vacuum source.

24. A surface finishing machine as is claim 23 including dust collection means for the collection of the extracted dust.

25. A surface finishing machine as in claim 23 wherein the vacuum connection means includes at least one hollow cylindrical dust extraction peg, the dust extraction peg adapted to align with at least one vacuum port of the mounting plate, the mounting plate including a thin backing plate with a peg aperture of diameter slightly smaller than the external diameter of the peg and adapted to receive the dust extraction peg, and the thickness and resiliency of the backing plate being such that the mounting plate may be pushed onto and pulled off the dust extraction peg and when secured relative to the dust extraction peg the backing plate resides within an external circumferential groove on the peg.

26. A surface finishing machine as in either claim 20 or 25 including a base plate connected to the random orbital drive means and adapted to receive the mounting plate.

27. A surface finishing machine as in claim 25 wherein the at least one peg is attached to an intermediate disc onto which the mounting plate is fitted.

28. A surface finishing machine as in claim 27 wherein the random orbital means includes at least one eccentrically driven weight, and the base plate is

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connected off centre with respect to said weight to thereby result in a random orbital motion of the base plate.

29. A surface finishing machine as in claim 28 including a chassis which shrouds the base and mounting plates and has a downwardly open aperture for
5 exposing the mounting plate and surface finishing pad connected thereto to a surface to be finished.

30. A surface finishing machine as in claim 29 wherein the chassis also includes a flexible skirt extending from a lower edge of the chassis, the flexible skirt adapted to form a partial vacuum seal with a surface during operation.

10 31. A surface finishing machine as in claim 30 wherein at least one of the vacuum ports is a gap between the periphery of the mounting plate and the chassis.

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